South Coast Air Quality Management District

FORM 400–E–12
GAS TURBINE

Mail Application To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765

Tel: (909) 396-3385
www.aqmd.gov

This form must be accompanied by a completed Application for a Permit to Construct/Operate -Form 400A, Form CEQA, Plot Plan and Stack Form

Permit to be issued to (Business name of operator to appear on permit):

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site):

○ **Fixed Location** ○ **Various Locations**

SECTION A: EQUIPMENT INFORMATION

Turbine

Manufacturer:

Model No.: | **Serial No.:**

Size (based on Higher Heating Value - HHV):

Manufacturer Maximum Input Rating: _____ MMBTU/hr _____ kWh

Manufacturer Maximum Output Rating: _____ MMBTU/hr _____ kWh

Function (Check all that apply)

☐ **Electrical Generation** ☐ **Driving Pump/Compressor** ☐ **Emergency Peaking Unit**
☐ **Steam Generation** ☐ **Exhaust Gas Recovery** ☐ **Other (specify):** _____

Cycle Type

○ **Simple Cycle** ○ **Regenerative Cycle**
○ **Combined Cycle** ○ **Other (specify):** _____

Combustion Type

○ **Tubular** ○ **Can-Annular** ○ **Annular**

Fuel (Turbine)

○ **Natural Gas** ○ **LPG** ○ **Digester Gas***
○ **Landfill Gas*** ○ **Propane** ○ **Refinery Gas*** ○ **Other* :** _____

* (If Digester Gas, Landfill Gas, Refinery Gas, and/or Other are checked, attach fuel analysis indicating higher heating value and sulfur content).

Heat Recovery Steam Generator (HRSG)

Steam Turbine Capacity _____ MW

Low Pressure Steam Output Capacity: _____ lb/hr @ _____ ^{0}F

High Pressure Steam Output Capacity: _____ lb/hr @ _____ ^{0}F

Superheated Steam Output Capacity: _____ lb/hr @ _____ ^{0}F

Duct Burner

Manufacturer: | **Model:**

Number of burners: | **Rating of each burner (HHV):**

Type:
○ **Low NOx (please attach manufacturer's specifications)**
○ **Other:** _____

Show all heat transfer surface locations with the HRSG and temperature profile

Fuel (Duct Burner)

○ **Natural Gas** ○ **LPG** ○ **Digester Gas***
○ **Refinery Gas*** ○ **Landfill Gas*** ○ **Propane** ○ **Other* :** _____

*(If Digester Gas, Landfill Gas, Refinery Gas, and/or Other are checked, attach fuel analysis indicating higher heating value and sulfur content).

Air Pollution Control	○ **Selective Catalytic Reduction (SCR)*** ○ **Selective Non-catalytic Reduction (SNCR)*** ○ **Oxidation Catalyst*** ○ **Other (specify)*** _____ ○ **Steam/Water Injection:** **Injection Rate:** _____ lbs. water/lbs. fuel, **or** _____ mole water/mole fuel * Separate application is required.
	Capital Cost: _____ **Installation Cost:** _____ **Annual Operating Cost:** _____
Oxidation Catalyst Data (If Applicable)	**Manufacturer:** _____ **Model:** _____
	Catalyst Dimensions: **Length:** _____ ft. _____ in. **Width:** _____ ft. _____ in. **Height:** _____ ft. _____ in.
	Catalyst Cell Density: _____ cells/sq. in. **Pressure Drop Across Catalyst:** _____
	Manufacturer's Guarantee **CO Control Efficiency:** _____ % **Catalyst Life:** _____ yrs. **VOC Control Efficiency:** _____ % **Operating Temp. Range:** _____ ^{0}F
	Space Velocity (gas flow rate/catalyst volume): _____ **Area Velocity (gas flow/wetted catalyst surface area):** _____
	VOC Concentration into Catalyst: _____ PPMVD @ 15 % O_2 **CO Concentration into Catalyst:** _____ PPMVD @ 15 % O_2

SECTION B: OPERATION INFORMATION

	Pollutants	Maximum Emissions Before Control*		Maximum Emissions After Control	
		PPM @15% O_2, dry	lb/Hour	PPM @15% O_2, dry	lb/Hour
On-line Emissions Data	ROG				
	NOx				
	CO				
	PM10				
	SOx				
	NH3				

* Based on temperature, fuel consumption, and MW output

Reference (attach data):

☐ **Manufacturer Emission Data** ☐ **EPA Emission Factors** ☐ **AQMD Emission Factors** ☐ **Source Test**

Stack or Vent Data	**Stack Height:** _____ ft. _____ in. **Stack Diameter:** _____ ft. _____ in. **Exhaust Temperature:** _____ ^{0}F **Exhaust Pressure:** _____ inches water column **Exhaust Flow Rate:** _____ CFM **Oxygen Level:** _____ %
Operating Schedule	**Normal:** _____ **hours/day** _____ **days/week** _____ **weeks/yr** **Maximum:** _____ **hours/day** _____ **days/week** _____ **weeks/yr**

_____ Serial Number

Startup Data	**No. of Startups per day:** _____ **No. of Startups per year:** _____ **Duration of each startup:** _____ **hours**				
Shutdown Data	**No. of Shutdowns per day:** _____ **No. of Shutdowns per year:** _____ **Duration of each shutdown:** _____ **hours**				
Startup and Shutdown Emissions Data	**Pollutants**	**Startup Emissions**		**Shutdown Emissions**	
		PPM @15% O_2, dry	**lb/Hour**	**PPM @15% O_2, dry**	**lb/Hour**
	ROG				
	NOx				
	CO				
	PM10				
	SOx				
	NH3				

Monitoring and Reporting

Continuous Emission Monitoring System (CEMS)

CEMS Make: _____

CEMS Model: _____

Will the CEMS be used to measure both on-line and startup/shutdown emissions? ○ **Yes** ○ **No**

The following parameters will be continuously monitored:

☐ **NOx** ☐ **CO** ☐ **O_2**

☐ **Fuel Flow Rate** ☐ **Ammonia Injection Rate** ☐ **Other (specify)** _____

☐ **Ammonia Stack Concentration:** **Ammonia CEMS Model** _____

Ammonia CEMS Make _____

SECTION C: APPLICANT CERTIFICATION STATEMENT

I hereby certify that all information contained herein and information submitted with this application is true and correct.

SIGNATURE OF PREPARER:	**TITLE OF PREPARER:**	**PREPARER'S TELEPHONE NUMBER:** _____ **PREPARER'S E-MAIL ADDRESS:** _____
CONTACT PERSON FOR INFORMATION ON THIS EQUIPMENT: _____ **E-MAIL ADDRESS:** _____	**CONTACT PERSON'S TELEPHONE NUMBER:** _____ **FAX NUMBER:** _____	**DATE SIGNED:**

Validate/Print Reset

CONFIDENTIAL INFORMATION

Under the California Public Records Act, all information in your permit application will be considered a matter of public record and may be disclosed to a third party. If you wish to keep certain items as confidential, please complete the following steps:

(a) Make a copy of any page containing confidential information blanked out. Label this page "public copy."
(b) Label the original page "confidential." Circle all confidential items on the page.
(c) Prepare a written justification for the confidentiality of each confidential item. Append this to the confidential copy.

_____ Serial Number